

Rivulus marmoratus Poey from the West Coast of Florida

ROBERT W. HASTINGS

THE first Florida specimen of the cyprinodont fish *Rivulus marmoratus* Poey was collected at Key West in 1927 (Fowler, 1928, reported as *R. cylindraceus*; see Rivas, 1945). No other specimens were known from the United States until 1950 when L. R. Rivas collected two in Biscayne Bay. Subsequently, several larger collections have been made, indicating that the species has become well established in the state and is apparently dispersing to new areas (Harrington and Rivas, 1958; Tabb and Manning, 1961; Thomerson, 1966). It is now common in the Biscayne Bay area and in the Indian River area near Vero Beach.

On August 21, 1967, I collected two specimens of *Rivulus marmoratus* (25.2 and 33.9 mm SL) from a small tidal slough 0.6 miles north of Vanderbilt Beach (about 50 yards from the open Gulf Coast), in Collier County, Florida. These specimens are now deposited in the Florida State University Fish Collection, No. 15971. Apparently, this is the first record of this species from the west coast of Florida. These fish were collected by pulling a small dip net under submerged logs in the water. The water was clear and less than one foot in depth. The bottom was primarily sand, with soft mud in places. The slough was surrounded by mangroves, and numerous small, fleshy plants were growing in the water.

Other fishes collected at this locality were *Adinia xenica*, *Cyprinodon variegatus*, *Fundulus grandis*, *Fundulus similis*, and *Poecilia latipinna*.

Since *Rivulus marmoratus* is apparently a recent invader of Florida waters, it will be interesting to follow its pattern of dispersal during subsequent years. It is a self-fertilizing hermaphrodite and could be extremely useful in a variety of experimental studies in physiology and genetics (Harrington, 1961 and 1963; Kallman and Harrington, 1964).

LITERATURE CITED

- FOWLER, H. W. 1928. Fishes from Florida and the West Indies. Proc. Acad. Nat. Sci. Philadelphia, vol. 80, pp. 451-473.

- HARRINGTON, R. W., JR. 1961. Oviparous hermaphroditic fish with internal self-fertilization. *Science*, vol. 134, no. 3492, pp. 1749-1750.
- . 1963. Twenty-four hour rhythms of internal self-fertilization and of oviposition by hermaphrodites of *Rivulus marmoratus*. *Physiol. Zool.*, vol. 36, pp. 325-341.
- HARRINGTON, R. W., JR., AND L. R. RIVAS. 1958. The discovery in Florida of the cyprinodont fish, *Rivulus marmoratus*, with a redescription and ecological notes. *Copeia*, no. 2, pp. 125-130.
- KALLMAN, K. D., AND R. W. HARRINGTON, JR. 1964. Evidence for the existence of homozygous clones in the self-fertilizing hermaphroditic teleost, *Rivulus marmoratus* Poey. *Biol. Bull.*, vol. 126, pp. 101-114.
- RIVAS, L. R. 1945. The discovery and redescription of the types of *Rivulus marmoratus* Poey, a cyprinodont fish from Cuba. *Jour. Washington Acad. Sci.*, vol. 35, pp. 95-97.
- TABB, DURBIN C., AND RAYMOND B. MANNING. 1961. A check-list of the flora and fauna of northern Florida Bay and adjacent brackish waters of the Florida mainland. *Bull. Mar. Sci. Gulf and Caribbean*, vol. 11, pp. 552-649.
- THOMERSON, JAMIE E. 1966. *Rivulus marmoratus*, a rare and unusual killifish from Florida. *Jour. Amer. Killifish Assn.*, vol. 3, no. 3, pp. 48-51.

*Department of Biological Science, Florida State University,
Tallahassee, Florida 32306.*